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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/708,036	02/04/2004	Ashok V. Joshi	MIC 011125CO01	2035

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EXAMINER
GHALI, ISIS A D

ART UNIT	PAPER NUMBER
1615	

MAIL DATE	DELIVERY MODE
07/18/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/708,036	JOSHI, ASHOK V.	
	Examiner	Art Unit	
	Isis A. Ghali	1615	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *21 May 2007* .

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-14* is/are pending in the application.

4a) Of the above claim(s) *11-14* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-10 and 15-20* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11)☐ The proposed drawing correction filed on _____ is: a)☐ approved b)☐ disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.

12)☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____ .

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

a) ☐ The translation of the foreign language provisional application has been received.

15)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ .
4) ☐ Interview Summary (PTO-413) Paper No(s). _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other:

DETAILED ACTION

The receipt is acknowledged of applicants' amendment filed 05/21/2007.

Claims 1-14 were previously presented, and claims 15-20 have been added.

Election/Restrictions

1. This application contains claims 11-14 drawn to nonelected invention. A complete reply to the final rejection must include cancellation of nonelected claims or other appropriate action (37 CFR 1.144) See MPEP § 821.01.

Claims 1-10 and 15-20 are included in the prosecution.

The following new ground of rejection is necessitated by applicants' amendment:

Claim Rejections - 35 USC § 112

2. The following is a quotation of the first paragraph of 35 U.S.C. 112:

> The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

3. Claims 1-10 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter

which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. This is a new matter rejection. Claims 1, 6, and 8 are amended to recite "said reactive material effective to react with a contaminant". The recitation is not supported by the original specification. The specification disclosed in paragraphs 0045, 0048, 0050, and 0062: "in each embodiment of the invention, beneficial material has properties which tend to kill or neutralize contaminants, such as microorganisms, germs, insects bacteria, viruses, undesirable chemicals and/or compounds, etc." Therefore, nowhere a disclosure of reactive material that reacts with contaminant has been found. In accordance to MPEP 714.02, applicant should specifically point out to where in the disclosure a support for any amendment made to the claims can be found.

The following rejection has been discussed in the previous office action, and are maintained for reasons of record:

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States

only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

5. Claims 1-3, 6-10 are rejected under 35 U.S.C. 102(b) as being anticipated by US 5,985,388 ('308).

US '308 disclosed material for coating medical devices comprising metal oxides such as silver oxide and zinc oxide (abstract; col.4, lines 20-23; col.7, lines 11-21). The material can be used in medical devices such as wound dressing or prepared in ointment, solution or paint, i.e. reads on support and substrate (col.7, lines 35-42; col.8, lines 17-20). The silver oxide deposited with atom molecules of a different material. The different material includes metals such as Ti, Zn, Si, or oxides or halides thereof (col.7, lines 11-21) and this reads on the metal ion exchanged membrane recited in claim 2. The reference disclosed method for incorporating the material into the substrate comprising mixing the powdered metal with the adhesive tape (col.17, lines 44-46).

6. Claims 1-3, 6-8 are rejected under 35 U.S.C. 102(e) as being anticipated by US 6,333,093 ('093).

US '093 disclosed wound dressing where the skin contacting surface comprises substrate associated with metal selected from the group comprising silver (abstract; col.3, lines 1-7; col.5, line 40). The skin-contacting layer comprises matrix that incorporates the silver oxide deposited with atom molecules of a different material. The different material includes metals such as Ti, Zn, Si, or oxides or halides thereof (col.3, lines 8-13); and this reads on the metal ion exchanged membrane recited in claim 2.

The reference disclosed conventional method for incorporating the material into the substrate comprising mixing the powdered metal and the substrate (col.9, lines 27-35).

Response to Arguments

7. Applicant's arguments filed 05/21/2007 have been fully considered but they are not persuasive. Applicants argue that none of US '308 or US '093 discloses reactive material for reacting with contaminant to form different compound that is less contaminating. The cited prior art may temporarily deal with the effect of contaminant, however, it does not change the contaminant itself as applicants' product.

In response to this argument, applicants' attention is directed to the scope of the present claims that is product and conventional method of its production. All the elements of the product and all the steps of the method are disclosed by the cited prior art. The capability of the reactive material to react with contaminant is inherent property of the claimed compounds. The prior art product is capable to effect of contaminant as applicants themselves admit. In response to applicant's argument that the references fail to show certain features of applicant's invention, it is noted that the features upon which applicant relies (i.e., forming different compound that is less contaminating) are not recited in the rejected claim(s). Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993). In any event, reaction of the reactive material with the contaminant is directed to intended use of the product, and the future intended use does not impart patentability to claims directed to product or

method of its making. If the prior art product is capable to perform the function of the present claims, then it anticipates.

Claim Rejections - 35 USC § 103

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

9. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

10. Claims 4, 15, 17 and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over any of US '308 or US '093 each in view of US '6,190,407 ('407).

The teachings of US '308 and US '093 are discussed above, however, US '308 does not teach the materials recited in claims 4, 15, 17, and 19.

US '407 teaches medical article such as wound dressing associated with antimicrobial element to provide the desired antimicrobial activity over selected period of time (abstract; col.5, line 60). The medical article comprises substrate comprises elemental metal, preferably silver, that is oxidized by super oxides (col.11, lines 25-40; claims 1-5, and 12).

Therefore, it would have been obvious to one having ordinary skill in the art at the time of the invention to provide medical article comprising substrate and metal oxides as disclosed by any of US '308 or US '093, and add super oxide to the medical as disclosed by US '407, motivated by the teaching of US '407 that super oxide oxidize the metal to provide controlled antimicrobial activity, with reasonable expectation of having medical article comprising substrate and super oxide oxidizing elemental metal to provide a controlled antimicrobial effect of the medical article.

Response to Arguments

11. Applicant's arguments filed 05/21/2007 have been fully considered but they are not persuasive. Applicants argue that US '407 teaches the use of superoxides to create oxidizing condition to enhance dissolution of the antimicrobial elements, and oxidation is necessary step for solubilizing the metal or metal ions, while applicants claim insoluble peroxides. No suggestion in the prior art to use the peroxide as insoluble beneficial agents. The art appear combinable with the aid of hindsight. Applicants argue that US '407 does not teach the specific peroxides as claimed.

In response to these arguments, it is argued that the present claims are directed to product and conventional method of its production, and all the elements of the product and all the steps of its production are disclosed by the combined teachings of the references. The superoxides disclosed by US '407 are expected to have the same solubilities since compounds and their properties are inseparable. US '407 does not disclose the superoxides to be soluble. Superoxides of the prior art are capable to perform the antimicrobial function as presently claimed product.

In response to applicant's argument that there is no suggestion to combine the references, the examiner recognizes that obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either in the references themselves or in the knowledge generally available to one of ordinary skill in the art. See *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988) and *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992). In this case, it would have been obvious to one having ordinary skill in the art at the time of the invention to provide medical article comprising substrate and metal oxides as disclosed by any of US '308 or US '093 since are both are directed to antimicrobial products, and add super oxide to the medical as disclosed by US '407, motivated by the teaching of US '407 that super oxide oxidize the metal to provide controlled antimicrobial activity, with reasonable expectation of having medical article comprising substrate and super oxide oxidizing elemental metal to provide a controlled antimicrobial effect of the medical article. It has been held that a prior art reference must either be in the field of applicant's endeavor or,

if not, then be reasonably pertinent to the particular problem with which the applicant was concerned, in order to be relied upon as a basis for rejection of the claimed invention. See *In re Oetiker*, 977 F.2d 1443, 24 USPQ2d 1443 (Fed. Cir. 1992). In this case, the combined art are concerned with the same problem by which applicant are concerned, which is having antimicrobial article, and are in the same field of applicant's endeavor.

In response to applicant's argument that the examiner's conclusion of obviousness is based upon hindsight reasoning, it must be recognized that any judgment on obviousness is in a sense necessarily a reconstruction based upon hindsight reasoning. But so long as it takes into account only knowledge which was within the level of ordinary skill at the time the claimed invention was made, and does not include knowledge gleaned only from the applicant's disclosure, such a reconstruction is proper. See *In re McLaughlin*, 443 F.2d 1392, 170 USPQ 209 (CCPA 1971).

Regarding US '407 does not teach the specific peroxides, applicants attention is directed to claim 12 of US '407 wherein the reference teaches silver and aluminum metals.

It is well established that the claims are given the broadest interpretation during examination. A conclusion of obviousness under 35 U.S.C. 103 (a) does not require absolute predictability, only a reasonable expectation of success; and references are evaluated by what they suggest to one versed in the art, rather than by their specific disclosure. *In re Bozek*, 163 USPQ 545 (CCPA 1969).

In the light of the foregoing discussion, the Examiner's ultimate legal conclusion is that the subject matter defined by the claims would have *prima facie* been obvious within the meaning of 35 U.S.C. 103 (a).

12. Claims 5, 16, 18 and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over any of US '308 or US '093 each in view of US 6,573,205 ('205).

The teachings of US '308 and US '093 are discussed above, however, US '308 does not teach the materials recited in claims 5, 16, 18 and 20.

US '205 teaches infection control products such as wound dressing comprising substrate and perovskites (abstract; col.4, lines 20-55; col.10, lines 31-33).

Therefore, it would have been obvious to one having ordinary skill in the art at the time of the invention to provide medical article comprising substrate and metal oxides as disclosed by any of US '308 or US '093, and add perovskites to the medical article as disclosed by US '205, motivated by the teaching of US '205 that material comprising perovskites such as wound dressing are capable for infection control, with reasonable expectation of having medical products such as wound dressing comprising substrate and perovskites that controls infection of the wound effectively.

Response to Arguments

13. Applicant's arguments filed 05/21/2007 have been fully considered but they are not persuasive. Applicants argue that US '205 teaches using perovskites in filtering media. US '205 does not teach perovskite as beneficial agent for reacting with

contaminant and does not teach use them for their excess oxygen content. One of skill in the art would not think of using filter media as a water reactant to contaminant.

In response to these argument, it is argued that US '205 is relied upon for the solely teaching of perovskites as antimicrobial agents. US '205 also teaches the use of perovskites in wound dressing at col.10, lines 32-33. It is expected that perovskites of the prior art have excess oxygen content since compounds and their properties are inseparable. It has been held that a prior art reference must either be in the field of applicant's endeavor or, if not, then be reasonably pertinent to the particular problem with which the applicant was concerned, in order to be relied upon as a basis for rejection of the claimed invention. See *In re Oetiker*, 977 F.2d 1443, 24 USPQ2d 1443 (Fed. Cir. 1992). In this case, the combined art are concerned with the same problem by which applicant are concerned, which is having antimicrobial article, and are in the same field of applicant's endeavor.

In response to applicant's argument that there is no suggestion to combine the references, the examiner recognizes that obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either in the references themselves or in the knowledge generally available to one of ordinary skill in the art. See *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988) and *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992). In this case, it would have been obvious to one having ordinary skill in the art at the time of the invention to provide medical article comprising substrate and metal oxides as disclosed by any of US '308 or

US '093, and add perovskites to the medical article as disclosed by US '205, motivated by the teaching of US '205 that material comprising perovskites such as wound dressing are capable for infection control, with reasonable expectation of having medical products such as wound dressing comprising substrate and perovskites that controls infection of the wound effectively.

It is well established that the claims are given the broadest interpretation during examination. A conclusion of obviousness under 35 U.S.C. 103 (a) does not require absolute predictability, only a reasonable expectation of success; and references are evaluated by what they suggest to one versed in the art, rather than by their specific disclosure. *In re Bozek*, 163 USPQ 545 (CCPA 1969).

In the light of the foregoing discussion, the Examiner's ultimate legal conclusion is that the subject matter defined by the claims would have *prima facie* been obvious within the meaning of 35 U.S.C. 103 (a).

Conclusion

14. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

15. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. US 6,267,782 disclosed medical articles with adhered antimicrobial elemental metals.

16. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Isis A. Ghali whose telephone number is (571) 272-0595. The examiner can normally be reached on Monday-Thursday, 7:00 to 5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael Woodward can be reached on (571) 272-8373. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a

USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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